Saturday 13 January 2001
BMJ

Children who kill

They can and should be reclaimed

Juvenile delinquency, including violence, is increasing, but homicide committed by children remains rare.[1] While the acts and features of children who kill are heterogeneous, all these children are seriously disturbed, with high rates of neuropsychological abnormalities, poor impulse control, school failure, and truancy. All have experienced severe family adversities: domestic violence, neglect, child abuse, substance misuse, maternal depression, and absence of fathers.[2–4] Because homicide by children is so rare, population approaches to prevention are not realistic.[5] But the evidence, though limited, is that with good care and psychiatric treatment the children do well and do not reoffend in later life.[2] This fact should govern the way that they are treated by the criminal justice system.

In Britain recent interest in child homicide followed the killing of 2 year old James Bulger by two boys aged 10. This case, which occurred in 1993, aroused what amounted to a national panic, resulting not only in excessive sentences for the children concerned but in more coercive juvenile justice legislation.[6 7] The then home secretary was persuaded by public and media pressures to increase the custodial sentences initially imposed by the trial judge, so that it seemed the boys would enter adult prison at 18 with the risk of undoing whatever benefits had occurred during their detention in local authority secure accommodation with expert psychiatric treatment.

The case also had two helpful consequences. Firstly, the organisation Justice produced a report, *Children and homicide: appropriate procedures for juveniles in murder and homicide cases*, in 1996,[1] which received insufficient attention at the time. This argued that children should be treated differently from adults because they are developing and have a greater chance of improving their adjustment. Indeed, the limited evidence supports this. A study by Strehlow et al in the 1980s followed up 15 out of 45 adolescents who had attempted or committed murder.[8] In the 10 no longer in custody social adjustment after an average of 7.5 years after the offence was good.

Secondly, the two boys appealed to the European Commission of Human Rights, which resulted in judgments from the European Court of Human Rights in 1999.[9 10] As a direct consequence of these judgments, the Lord Chief Justice issued new guidelines for conducting trials of juveniles in adult courts to avoid "intimidation, humiliation, or distress"; he reduced the boys' period of detention so that they will not now go to prison; and he has sought to safeguard their future privacy from an intrusive press.

The judgments of the European Court of Human Rights are forceful documents giving detailed accounts of the clinical states of the two boys, the court procedures, and the surrounding social climate. The court held that there had been no infringement of the right not to be subjected to inhuman or degrading treatment but that there had not been a fair trial. The circumstances of an adult court amid a blaze of publicity, with hostile crowds attending the boys' arrival at court each day, had a seriously inhibiting and intimidating effect, compromising their ability to understand and participate effectively in their trial. There was a second breach of the Convention on Human Rights in that the home secretary, not being independent of the executive, could not determine the length of detention without being subject to political pressures. Sentencing is a matter for judges, not politicians. Furthermore, there was a third breach in that the boys had had no opportunity to have the continued lawfulness of their detention determined by a judicial body.

But the recommendations of the European Court of Human Rights go further and are congruent with those of the report from Justice.[1] Firstly, the court recommended that the age of criminal responsibility, at present 10 years in England and Wales and among the lowest in Europe, should be reconsidered. Justice suggests it should be 12 or 14. We have argued that to limit the concept of culpability to intellectual understanding of "right and wrong" makes no sense.[2] Adults under extreme emotional arousal can act in ways they know to be wrong and later regret. Children are even less able to control their impulses.

Secondly, the court states that court procedures must be comprehensible to the young person and not intimidating. The Lord Chief Justice's new guidelines go some way towards realising this. Justice goes further and recommends that children under 14 should not have a public trial in an adult court.[1]

Finally, a prolonged sentence, irrespective of the offender's progress, operates against the aim and process of treating child offenders. This is especially so if a long sentence means that children will be transferred to an adult prison before being discharged from their sentence (as in most cases in the United Kingdom).

The objectives of sentencing should be the rehabilitation, education, and social integration of the offender and the protection of society—the first, of

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course, promoting the second. Deterrence and punishment are not rational options, and politicians who seek to inflame public feeling in these distressing cases are being forced to recognise this.

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Preventing respiratory syncitial virus bronchiolitis

Except in very high risk infants there is no cost effective prophylatic agent

Winter in the United Kingdom—wet, cold, miserable, and, yet again, the season for respiratory syncitial virus (RSV) bronchiolitis. About 3% of each year's birth cohort are admitted with bronchiolitis every winter in Europe, Australasia, and North America (20 000 infants in the UK, of whom 600 need ventilation[1]). Traditionally certain groups of infants are considered to be at high risk of developing more severe RSV bronchiolitis. These high risk groups include infants born prematurely (insufficient transfer of maternal RSV IgG) and those with chronic lung disease of prematurity, other underlying cardiorespiratory disease, or immunodeficiency. However the great majority of infants admitted are previously normal babies. The treatment of RSV bronchiolitis has had a chequered history, and, despite initial enthusiasm, it is now widely accepted that bronchodilators, steroids, and ribavirin have no overall significant benefit.[2] This therapeutic nihilism makes paediatricians uneasy, and if we have no treatment, then surely prevention must be the answer.

Pooled hyperimmune RSV intravenous immunoglobulin (RSV IVIG, Respigam) was licensed by the Food and Drug Admininstration in 1996 after the PREVENT study.[3] Monthly prophylaxis over the RSV season with RSV IVIG led to an overall reduction of 41% in admissions for RSV bronchiolitis in high risk groups. However, RSV IVIG required regular intravenous infusions of a high volume and protein load from pooled donors, with the risk of transmission of blood born pathogens. A Cochrane review of RSV IVIG is available.[4]

Palivizumab (Synagis) is a recombinant humanised mouse monoclonal antibody to the RSV F protein. It is a neutralising antibody that prevents RSV fusing with the cell membrane and can be given intramuscularly. The IMpact study was a multicentre randomised double blind placebo controlled trial of palivizumab. Infants born premature (<36 weeks' gestation) or with chronic lung disease of prematurity were randomised to receive either five monthly injections of placebo (n=500) or palivizumab (n=1002) over the RSV season. The primary end point was admission with RSV disease. The study showed a relative reduction in RSV related admissions of 55% (10.6% placebo, 4.8% palivizumab, p=0.0004).[5] Adverse events were the same in both study arms. The study was not powered to detect reductions in mortality. There was no significant reduction in prolonged admission (>14 days) or the number of days spent on a ventilator between the two groups.

Palivizumab is safe and certainly works, so should we use it? It has been licensed in the US, and the American Academy of Pediatrics suggests that palivizumab should be *considered* for infants either born prematurely or treated for chronic lung disease within six months of the RSV season.[6] Unfortunately, palivizumab is also very expensive.

The IMpact trial was not designed as a pharmacoeconomic study. When introducing a new preventive therapy clinicians need to consider not only the existing morbidity and mortality of the disease but also the efficacy and cost effectiveness of the prophylactic agent. We have recently summarised the incidence of readmission due to RSV disease noted in observational studies from North America and the UK.[7] Broadly similar readmission rates for RSV bronchiolitis were noted, of about 6-8 % for infants born <32 weeks' gestation and 12-17% for infants with chronic lung disease. Even in these high risk groups, mortality from RSV bronchiolitis is now extremely low, 0.13% in the IMpact study.

Several cost effectiveness studies have been performed. In the IMpact study the absolute risk reduction for the whole study group was 5.8%, giving a number needed to treat—that is, to prevent one hospital admission—of 17.2, with an expenditure of £25 500 (95%confidence interval £16 500 to £49 500) to prevent one hospital admission.[8] This type of analysis has been criticised, mainly because the admission rate among the placebo treated controls in the IMpact study was lower than previously noted. However, the broad agreement of the recent observational studies suggests that the number needed to treat calculations are reasonable, and possibly an underestimate. Other cost effectiveness studies have given similar results.[9–12]

Although these analyses do not take into consideration the increased incidence in wheezing during childhood after RSV bronchiolitis, it is unlikely that these extra costs will be significant. The only group of infants in whom the cost of admission was similar to the cost of palivizumab was those with severe chronic

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